

**In the Specification:**

Please insert a new paragraph with heading, on page 1, after the title as follows:

**Cross-reference to Related Application**

A1 This application claims priority to and is a divisional of U.S. Patent Application No. 09/690,338  
now U.S. Pat. No. 6,331,028  
to O'Neill et al., filed October 17, 2000<sup>A</sup>, which is incorporated herein by reference.

Please insert a new paragraph, on page 11, after the second full paragraph as follows:

A2 FIG. 22 is a graph illustrating the timing and temperature of the preferred polyisocyanurate core material when undergoing an exothermic reaction upon injection into the core of the composite structure.

Please replace the last paragraph on page 45 with the replacement paragraph as follows:

A3 Accordingly, the components of the polymeric core material 16 are selected such that upon encountering the reduced pressure in the evacuated cavity 148, the blowing agent begins to boil to thereby pre-expand the polymeric core material from a resinous state to a frothing foam. As indicated in FIG. 22, a preferred polymeric core

Please replace the paragraph on page 46 with the replacement paragraph as follows:

A4 material 16, described in further detail below, is a polyisocyanurate that is injected in a resinous state into the cavity 148 at about 85°F. When the polymeric core material 16 encounters the vacuum pressure of the cavity 148, the blowing agent immediately commences boiling and, in turn, causes the foaming resin to promptly fill the second region of the cavity formed between the fibrous layers 14, 14'. As further indicated in

FIG. 22, in less than approximately one minute, the exothermic reaction produces sufficient heat to raise the temperature of the polymeric core material 16 to about 140°F and, in turn, activate the latent catalyst and initiate a catalytic reaction within the core material. As a result, substantial heat is then generated as indicated by the upper curve in FIG. 22. As described above, the catalytic reaction, in combination with the predetermined vacuum maintained within the cavity, creates negative pressure gradients in the direction from an approximate central area of the foamed core 16 toward the fibrous layers 14, 14'. In contrast, and as shown by the lower curve in FIG. 22, a typical polyurethane resin reacts at a significantly slower rate than do the preferred core materials of the present invention.

Please delete Table 1 on page 47.

Please replace the paragraph on page 47 with the replacement paragraph as follows:

In one embodiment of the present invention, the polymeric core material 16 comprises a foaming polyurethane including a blowing agent and a catalyst that promote the relative reaction rates, as measured by the exothermic behavior. The preferred polyisocyanurate system achieves higher temperatures, at a much faster rate, promoting a faster cure cycle as shown typically in FIG. 22. Preferably, the blowing agent comprises a liquid blowing agent that boils upon encountering reduced pressure such as, for example, upon injection into the mold cavity under vacuum. The liquid blowing agent is not necessarily a low-boiling-point blowing agent, but rather is a blowing agent that boils upon encountering reduced pressure. As is known to those of ordinary skill in the pertinent art, such blowing agents do not provide optimal characteristics for insulation